CALFED Bay-Delta Program Project Information Form
Watershed Program - Full Proposal Cover Sheet

Attach to the cover of full proposal. All applicants must fill out this Information Form for their proposal. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Full Proposal Title: Cottonwood Creek Watershed Management Plan
   Concept Proposal Title / Number: Cottonwood Creek Watershed Management Plan
   Applicant: Cottonwood Creek Watershed Group
   Applicant Name: Ms. Vieva Swearingen, Coordinator
   Applicant Mailing Address: P.O. Box 1198, Cottonwood, CA 96022
   Applicant Telephone: 530 / 347-6637 Applicant Fax: 530 / 347-6346 Applicant Email: ccwg@shasta.com
   Fiscal Agent Name (if different from above): n / a
   Fiscal Agent Mailing Address: n / a
   Fiscal Agent Telephone: n / a Fiscal Agent Fax: n / a Fiscal Agent Email: n / a

2. Type of Project: Indicate the primary topic for which you are applying (check only one)

_____Assessment	_____ Monitoring
_____Capacity Building	_____ Outreach
_____Education	__X__ Planning
_____Implementation	_____ Research

3. Type of Applicant:

_____Academic Institution / University	_____ X Non-Profit
_____Federal Agency	_____ Private party
_____Joint Venture	_____ State Agency
_____Local Government	_____ Tribe or Tribal Government

4. Location (including County):

   What major watershed is the project primarily located in:
   - _____ Klamath River (Coast and Cascade Ranges)
   - __X__ Sacramento River (Coast, Cascade and Sierra Ranges)
   - _____ San Joaquin River (Coast and Sierra Ranges)
   - _____ Bay-Delta (Coast and Sierra Ranges)
   - _____ Southern CA (Coast and Sierra Ranges)
   - _____ Tulare Basin (Coast, Sierra and Tehachapi Ranges)

5. Amount of funding requested: $ 1.2 million
   Cost share / in-kind partners? ____X Yes _____No
   Identify partners and amount contributed by each:

Total of $1,335,360, distributed among Tasks 1-5 as shown on the Budget Summary table and explained in the text in proposal Section 3. These contributions will be from citizen volunteers, CCWG TAC members and focus area committee members, Board members, and agency representatives who serve on TAC or who are associated with CCWG's agency collaborators. These contributors will help in public outreach activities, analyses, documentation, pilot project alternatives development and selection, and monitoring.

6. Have you received funding from CALFED before? X Yes ____No
   If yes, identify project title and source of funds:

CALFED Grant No. 98-E05, Cottonwood Creek Watershed Group Formation
CALFED Grant No. 2000-E03, Cottonwood Creek Watershed Assessment

By signing below, the applicant declares the following:

1. The truthfulness of all representations in their proposal
2. The individual signing this form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or an organization)
3. The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the Watershed Program Proposal Solicitation Package and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in the Proposal Solicitation Package.

_____
Printed name of applicant

_____
Signature of applicant

Environmental Information Form

Successful applicants are responsible for complying with all applicable laws and regulations for their projects, including the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA

NEPA/CEQA

Any necessary NEPA or CEQA documents for an approved project must tier from the CALFED Programmatic EIS/EIR. Approved projects must incorporate mitigation strategies listed in Appendix A of the CALFED Programmatic Record of Decision to avoid or minimize the projects adverse environmental impacts. Applicants are encouraged to review the Programmatic EIS/EIR and incorporate the applicable mitigation strategies from Appendix A of the Programmatic Record of Decision in developing their projects and the NEPA/CEQA documents for their projects.

1. Will this project require compliance with CEQA, NEPA, or both? Yes_____No__ X

2. If you checked no to question 1, please explain why compliance is not required for the actions in this proposal>

No commitments resulting in physical change anticipated from plan. In the event that endorsement of the project by agencies requires NEPA/CEQA compliance, that need will be noted and addressed in subsequent documentation that will tier off the CALFED Programmatic EIS/EIR.

3. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

CEQA Lead Agency_____

NEPA Lead Agency_____

4. Please check which type of document will be prepared.

CEQA		NEPA
Categorical Exemption	**_____**	**Categorical Exclusion _____**
Initial Study	**_____**	**Environmental Assessment/FONSI_____**
EIR	**_____**	**EIS_____**

5. If you anticipate relying on either or both the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that covers this project. (Example: Fish and Wildlife Service Manual at 516 DM 6 Appendix 1.4 Categorical Exclusions Section B Resources Management: (1) Research, inventory, and information collection activities directly related to the conservation of fish and wildlife resources.)

n / a

6. IF THE CEQA/NEPA PROCESS IS NOT COMPLETE, PLEASE DESCRIBE THE ESTIMATED TIMELINES FOR THE PROCESS AND THE EXPECTED DATE OF COMPLETION.

n / a

7. If the CEQA/NEPA document has been completed:

What is the name of the document? n / a

Please attach a copy of the CEQA/NEPA document to the application.

Environmental Permitting and Approvals

Successful applicants must tier their project's permitting from the CALFED Record of Decision and attachments providing programmatic guidance on complying with the state and federal endangered species acts, the Coastal Zone Management Act, and sections 404 and 401 of the Clean Water Act. The CALFED Program will provide assistance with project permitting through its newly established permit clearing house.

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please check all that apply.

LOCAL PERMITS AND APPROVALS	Needed?	Obtained?
Conditional use permit	NO	
Variance	NO	
Subdivision Map Act	NO	
Grading permit	NO	
General plan amendment	NO	
Specific plan approval	NO	
Rezone	NO	
Williamson Act Contract cancellation	NO	
Other	NO	
STATE PERMITS AND APPROVALS	Needed?	Obtained?
Scientific collecting permit	N/A	
CESA compliance: 2081	N/A	
CESA compliance: NCCP	N/A	
1601/03	N/A	
CWA 401 certification	N/A	
Coastal development permit	N/A	
Reclamation Board approval	N/A	
Notification of DPC or BCDC	N/A	
Other	N/A	
FEDERAL PERMITS AND APPROVALS	Needed?	Obtained?
ESA compliance Section 7 consultation	N/A	
ESA compliance Section 10 permit	N/A	
Rivers and Harbors Act	N/A	
CWA 404	N/A	

Other	N / A	
PERMISSION TO ACCESS PROPERTY	Needed?	Obtained?
Permission to access city, county or other local agency land. If yes, indicate the name of the agency:_____	NO	
Permission to access state land. If yes, indicate the name of the agency: _____	NO	
Permission to access federal land. If yes, indicate the name of the agency: _____	NO	
Permission to access private land. If yes, indicate the name of the agency: _____	NO	

CALFED BAY-DELTA PROGRAM

PROPOSAL SOLICITATION PACKAGE
LAND USE CHECKLIST

All applicants must fill out this Land Use Checklist for their proposal. Applications must contain answers to the following questions to be responsive and to be considered for funding. *Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.*

1) Do the actions in the proposal involve physical changes in the land use? Yes (No)

a) If you answered yes to # 1, describe what actions will occur on the land involved in the proposal?

b) If you answered no to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

Watershed Management Plan; design (but not implementation) of pilot projects.

2) How many acres of land will be subject to a land use change under the proposal? Ø

3) What is the current land use of the area subject to a land use change under the proposal? What is the current zoning and general plan designation(s) for the property? Does the current land use involve agricultural production?

a) Current land use Various ranging from urban to wilderness
b) Current zoning Various from commercial to recreational
c) Current general plan designation Various
d) Does current use involve agricultural production? YES (NO)

4) Is the land subject to a land use change in the proposal currently under a Williamson Act contract? YES (NO)

5) What is the proposed land use of the area subject to a land use change under the proposal?

No changes proposed

6) Will the applicant acquire any land under the proposal, either in fee or through a conservation easement? YES (NO)

a) If you answered yes to # 6, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement:

b) Total number of acres to be acquired under proposal _____
c) Number of acres to be acquired in fee _____
d) Number of acres to be subject to conservation easement _____

7) **For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.**

n / a

8) **Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal? Yes (No)**

   a) **If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission for access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific sites have not been identified will be required to provide access needs and permission for access within 30 days of notification of approval.**

9) **For land acquisitions (fee title or easements), will existing water rights be acquired? Yes (No)** n / a

10) **Does the applicant propose any modifications to the water right or change in the delivery of the water? Yes (No)**

   a) **If yes to #10, please describe the modifications or changes.**

1. Project Description

Description of Project

Numerous watershed restoration projects have been and are being implemented in the Cottonwood Creek Watershed, Shasta and Tehama counties, without benefit of a comprehensive watershed management plan. This project will culminate in a Watershed Management Plan (WMP) that builds on the Cottonwood Creek Watershed Assessment, currently being conducted by the Cottonwood Creek Watershed Group (CCWG). The Watershed Assessment will document existing available data, define recent trends contributing to current watershed baseline conditions, provide recommendations for further study, and identify gaps in the data record. The WMP will (1) fill data gaps and incorporate technical analyses identified in the Watershed Assessment, (2) identify overall restoration objectives in cooperation with landowners, resource agencies, and other interested members of the community (stakeholders), (3) recommend actions to achieve these objectives, and (4) enable the CCWG to coordinate planned and ongoing restoration and monitoring actions.

As defined by CALFED, the watershed comprises two distinct ecological management units (EMU): upper Cottonwood Creek EMU and lower Cottonwood Creek Fan EMU. The WMP will recommend pilot projects and watershed-wide management strategies focusing on these two distinct EMUs. The WMP will consist of the following four primary components and associated watershed management issue areas:

- **Agricultural Management:** erosion and sediment control, agricultural practices, riparian restoration (revegetation, bank protection, stream channel restoration)
- **Forestry Management:** fuel and vegetation management, sediment / drainage controls (BMPs) on roadways, land stability and other geologic issues on both public and private lands
- **Hydrology:** streambank, channel, and meander zone restoration; fluvial geomorphology (sediment transport and gravel recruitment); flood control and floodplain and wet meadow restoration (flow retention); aquifer condition
- **Biological/Fisheries:** spawning gravel, water quality and water temperature, instream structures

Pilot projects will be designed to test the feasibility and effectiveness of WMP strategies prior to implementing the program on a larger, watershed scale. Designing the pilot projects will require original hydrologic modeling; mapping; erosion analyses; land use, riparian, and biological assessments; and stakeholder involvement and coordination. The project will be conducted through the following tasks:

1. Public Outreach / Stakeholder Involvement
2. Technical Background and Analysis
3. Documentation
4. Pilot projects
5. Monitoring
6. Project Management

Underlying Assumptions

Many of CCWG's assumptions, goals, and objectives derive from CALFED's *Ecosystem Restoration Program Plan* (ERPP) (CALFED, Revised Draft, February 1999) and *Watershed Program Plan* (CALFED, Final Programmatic EIS / EIR Technical Appendix, July 2000). Among CCWG's assumptions are that good land use practices (e.g., forestry management, agricultural practices) can beneficially affect watershed health and that local community-based watershed management in collaboration with resource agencies can best achieve the ERPP vision for the Cottonwood Creek Ecological Management Zone in

a way that conforms closely with the community's needs and preferences. To apply these assumptions to development of specific WMP project goals, objectives, and proposed actions, CCWG has reached out to landowners and other interested stakeholders in the watershed, enlisted the assistance of members of the scientific and regulatory community to serve on its Technical Advisory Committee (TAC), and formed strategic alliances with public agencies and private industry professionals to leverage their resources and technical and scientific expertise.

Expected Outcomes

The project will result in a comprehensive WMP that identifies and analyzes alternative watershed management strategies and coordinates future watershed management activities, including those by public agencies and private interests. The WMP will be developed and maintained, refined, and periodically updated, as necessary, in an adaptive management framework. A comprehensive monitoring plan being developed as part of the WMP will track changes in historical and baseline watershed conditions, currently being characterized in CCWG's Watershed Assessment, that occur as a result of natural processes, land use practices, and watershed management actions. Monitoring will facilitate adaptive management by revealing those actions that most effectively achieve watershed goals and objectives. Adaptive management also will be served by the active public outreach and education and data sharing elements of the proposed project, which will ensure that information on effective management and restoration actions is shared with CALFED, other resource agencies, and other local watershed groups and conservancies. Another project outcome will be the design of a pilot project or projects that will be implemented to test the effectiveness of strategies developed for the WMP before those strategies are generally applied to the entire watershed[1].

Timetable for Completion

TASK NAME	SUBTASK	START	FINISH
Public Outreach			
	Ongoing Efforts	January-2002	December 2004
	Establish Desired Condition	March 2002	September 2002
	Recommend Actions	September 2002	April 2003
	Endorse Recommendations	May 2003	December 2004
Technical Background and Analysis			
	Technical Background/Fill Data Gaps	March 2002	September 2002
	Technical Analysis	October 2002	May 2003
Documentation			
	Administrative Draft	January 2003	April 2003
	Public Draft	May 2003	October 2003
	Review of Public Comments	October 2003	December 2003
	Final Draft	December 2003	July 2004
Pilot Projects			
	Identify Pilot Project Locations	February 2003	April 2003
	Plan Pilot Project Study	April 2003	August 2003
	Design Pilot Project	August 2003	December 2004
	Establish Pilot Project Monitoring Protocols	December 2003	December 2004
Monitoring			
	Establish Protocols	September 2003	September 2004
	Monitor Results of Final Draft	September 2004	December 2004
Project Management			
	Monthly Reporting and Coordination	January 2002	December 2004

[1] Although pilot project design is included in this proposal, environmental documentation, permitting, and construction of the pilot project(s) are not included. It is assumed that implementation of the pilot project(s) will occur under another funding mechanism.

General Methodology or Process

Restoration objectives will be developed and technical analyses and management planning implemented in concert with stakeholders, industry professionals, resource agencies, and a science and engineering consulting firm, CH2M HILL, which is experienced in watershed management, to provide a holistic, comprehensive watershed management strategy. Six tasks are proposed that reflect the approach to the project and will form the basis for the scope of services to be performed.

Task 1: Public Outreach/Stakeholder Involvement. The CCWG is currently undertaking an extensive public outreach effort for the Watershed Assessment. This effort will continue during WMP development, which will identify the desired watershed condition and recommend actions to achieve that condition. The CCWG Board of Directors may form ad hoc committees of representative stakeholders to address specific WMP focus areas. These efforts will be coordinated with Task 2.

Task 2: Technical Background and Analysis. This task will fill data gaps identified in the Watershed Assessment and model important physical processes outlined through the stakeholder involvement process. It is anticipated that detailed technical analyses will be conducted in areas of Agriculture, Forestry, Hydrology, and Biology.

Task 3: Documentation. An administrative draft will be circulated to CCWG members, including the TAC and ad hoc stakeholder committees, whose input will result in a public draft document. Public comments will be incorporated into a final draft document. If agencies endorsing the WMP require NEPA/CEQA compliance, that need will be noted and addressed in subsequent phases of the project when watershed management actions are to be implemented. It is assumed that such actions are covered under the CALFED Programmatic EIS/EIR, and project documentation would tier off the Programmatic EIS/EIR.

Task 4: Pilot Projects. One or more pilot projects will be identified that incorporate assumptions and recommendations indicated by findings of the ad hoc stakeholder committees and technical analyses. It is intended that the pilot projects will be developed to a degree that would allow for implementation following the final draft and compliance with any environmental or permitting requirements. Monitoring programs will also be put in place to quantify the success of the projects.

Task 5: Monitoring. Protocols will be established to measure the effectiveness of the WMP. The monitoring program will build on existing monitoring efforts identified in the Watershed Assessment. Monitoring protocols will be designed to be consistent with standard California Department of Forestry and Fire Protection (CDF) practices in place in the watershed and monitoring efforts being used in other, similar applications. CCWG acknowledges of that the Monitoring Plan must be submitted for CALFED review and approval prior to initiating data collection. The present Watershed Assessment project will facilitate meeting this requirement.

Task 6: Project Management. Project management will be ongoing throughout the project. Monthly coordination and progress reports will be submitted throughout the project that will document the efforts of CCWG, including in-kind contributions of its members and volunteers, and those of CCWG's consultant, CH2M HILL.

2. Qualifications and Readiness

a. Level of Institutional Structure, Ability and Experience to Administer Project, Responsible Fiscal Agent

CCWG consists of landowners and business owners coordinating with other groups, the local community, and agencies. CCWG members, participants, and collaborators include Shasta and Tehama county governments, the Shasta and Tehama County Farm Bureaus, Anderson-Cottonwood Irrigation District (ACID), Sierra Pacific Industries, local homeowners' associations, Evergreen and other schools, timber managers, water companies, fishing guides, U.S. Army Corps of Engineers (COE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), Tehama County Resource Conservation District (TCRCD), Western Shasta Resource Conservation District (WSRCD), Natural Resource Conservation Service (NRCS), California Department of Water Resources (DWR), Bureau of Land Management (BLM), U.S. Forest Service (USFS), National Marine Fisheries Service (NMFS), California Department of Transportation (Caltrans), University of California Extension, CDF, gravel extractors, and other interested parties.

The CCWG was formed with the assistance of a CALFED grant in response to urging of local communities and agencies in the watershed that recognized the need for such a coordinating group. The CCWG mailing list includes 2,400 addresses. Hundreds of people have attended monthly CCWG meetings, and 20 to 40 people regularly attend. The 7-member Board of Directors meets twice monthly. The TAC includes 17 individuals from 10 local, state, and federal agencies and private industry. Ms. Vieva Swearingen, CCWG Coordinator, is the responsible fiscal agent who will coordinate the project and administer the funds.

b. Available Technical Support

The CCWG will retain CH2M HILL, a local engineering, science, and planning consultant that has extensive experience in developing and implementing watershed management strategies, including design and construction of restoration actions and preparation of NEPA/CEQA documentation. CH2M HILL has in-house specialists in a range of disciplines applicable to the WMP. These disciplines include hydrology, biology, resource management, environmental compliance, and construction cost estimating. Additionally, CCWG participants, collaborators, and TAC members include many resource agencies (listed above) and their representatives. Their in-kind technical contributions are anticipated to include providing data for the ongoing Watershed Assessment, participating in the development of the proposed Cottonwood Creek WMP, and providing monitoring support.

c. Previous Projects of This Type

In its vision for the Cottonwood Creek Ecological Management Zone in Volume II of CALFED's ERPP (CALFED, February 1999, page 225), it states that "The creation of a watershed management plan by a local watershed conservancy or planning agency is necessary." Acting on this vision, a group of local landowners and collaborating or participating agencies and industrial interests determined to form the CCWG to coordinate local stakeholder and agency efforts to manage the watershed. CALFED awarded Grant No. 98-EO5 to organize the CCWG.

The ERPP (CALFED, February 1999, page 227) states that "Restoration of this Ecological Management Zone requires developing and implementing a comprehensive watershed management program for the upper and lower areas." Recognizing that the first step in developing a WMP is to compile existing watershed baseline data and identify gaps in the data, CCWG applied for and received CALFED Grant No. 2000-EO3 for the Cottonwood Creek Watershed Assessment, currently in progress. In the notification of the award of the grant, CALFED stated that, "CALFED previously funded the development of the Cottonwood Creek Watershed Group, a landowner group which works with the local agencies and other stakeholders. This project will support the development of a watershed assessment to guide fu-

ture activities within Cottonwood Creek. Because this is an important tributary, the Interim Science Panel recommended funding a year of continued work in this watershed."

3. Budget and Basis for Determining Project Costs

The stakeholder-driven approach was used to define the bounds of the WMP, the scope of the proposed work, and the timeline for completing the project, which formed the basis for determining cost. The WMP will rely on stakeholder input to identify the desired watershed condition and recommend actions to achieve the desired condition. Acquiring this input will involve intensive effort. Stakeholder involvement will require a basic level of technical education, and it is not presently possible to anticipate the precise level of detail or subject matter that stakeholders will have to address. The attached estimate assumes a moderate level of education and technical feedback. After key stakeholders agree on baseline information, consensus must be reached to generate specific recommendations on the desired watershed condition and proposed actions to achieve the desired condition. Because consensus may take time to achieve; the attached estimate assumes a moderate level of coordination related to this effort.

The proposed scope of work covers a large geographic area and includes detailed technical review of the following four focus areas: Agricultural Management, Forestry Management, Hydrology, and Biology / Fisheries. These detailed technical reviews are anticipated to encompass the entire 930-square-mile watershed and could include development of original data, where needed. The scope of this task is similar to those technical reviews conducted for Mill Creek, Stony Creek, and Indian Valley; however, the Cottonwood Creek watershed study area encompasses a much larger geographic area, indicating a higher level of effort.

The timeline for completion was also a key factor in determining cost. The 3-year timeframe requires the technical team to respond quickly to the ad hoc stakeholder committee(s) and their recommendations. Consequently, the timeline projected for stakeholders to reach consensus on the focus areas is somewhat aggressive, and the technical responses to the needs of the ad hoc committees require the allocation of sufficient resources to maintain the timeline. The technical resources and watershed experience of the consultant, CH2M HILL, are expected to be especially valuable in this regard, because technical efforts are anticipated to occur quickly and will require the ability to quickly mobilize staff.

Costs presented in the attached spreadsheets were determined using the format provided in the proposal solicitation package. For CCWG costs, a rate of $65 dollars per hour was used to estimate labor costs for administering the contract. This rate includes overhead costs related to maintaining the CCWG office (rent, phones, etc.) and the benefits for employees (benefits / salary ratio for CCWG staff is <30 percent). A general level-of-effort was derived by estimating the approximate staff hours that would be devoted explicitly to administering the WMP over the 3-year horizon. For this estimate, supplies are defined as consumables directly associated with the project (newsletters, reports, maps, etc.). No permanent materials (computers, durable equipment, flow meters, etc.) are projected to be purchased under this proposal; therefore, costs for materials are not shown. No travel is anticipated during administration of the project, as all staff are local to the watershed.

CH2M HILL costs were estimated using a two-faceted approach. First, we estimated the total number of hours necessary to complete individual subtasks outlined for the WMP using an average labor rate derived from other, similar projects. The subtasks were then rolled into cost estimates for main tasks. WMP estimates were then compared to similar tasks on other projects occurring over similar timeframes to provide reference estimates. As with CCWG's cost estimate for administration, no materials costs are included in the estimate because none will be needed. Travel cost also is not included, as projected staff are primarily located in the CH2M HILL Redding office. Use of staff from Sacramento or the Bay Area is possible, but travel costs associated with them are anticipated to be minimal. CH2M HILL has federally audited overhead rates and has worked directly with CALFED on past projects. As noted elsewhere, there is not a specific task dedicated to NEPA / CEQA compliance because

the WMP is not anticipated to trigger NEPA/CEQA. In the event that funding agencies disagree, a NEPA/CEQA task will be added.

Cost estimates for the in-kind contributions were estimated by calculating the total number of volunteer hours anticipated to be contributed by members of the general public, the ad hoc stakeholder committees, and cooperating agencies. It is anticipated that these in-kind contributions will be substantial, as indicated by the degree of public participation to date and the active involvement of the CCWG TAC, which includes private industry and resource agency specialists.

The approach to achieving the stated goals of the WMP is cost effective because it places heavy emphasis on stakeholder and public involvement while leveraging the expertise and time of cooperating agencies. Further, use of CH2M HILL as the consultant provides access to technical resources that will allow timely WMP completion without the need to retain additional permanent staff for the CCWG.

The scale of the undertaking relative to other tributaries in the Sacramento Valley and the importance of the watershed to the Bay-Delta system are also notable cost factors. The 930-square-mile Cottonwood Creek Watershed is the largest undammed tributary on the west side of the Sacramento Valley and is the primary source of gravel recruitment for the upper Sacramento River. The opportunities for ecosystem restoration and attendant benefits to the Bay-Delta ecosystem are likely proportional to the size and importance of the watershed. Both a program budget summary and budget cost sheet are included below. Please note that the budget cost sheet shows a task for CCWG's administration of the contract in addition to the six WMP development tasks summarized in the table below, which will be performed by CH2M HILL in collaboration with stakeholders and resource agencies.

Limits on Funding

The WMP can be fully developed independently of Task 4, Pilot Projects. If only partial funding is available, CCWG suggests that Task 4 can be funded later during another funding cycle or through another funding mechanism. All other proposed tasks are mandatory (e.g., Project Management, Public Involvement) or otherwise essential to WMP development.

Watershed Budget and Project Summary
Cottonwood Creek Watershed Management Plan

Task	Task Description	Completion Date	Match Funds	CALFED Funds	Total
Task 1	**Public Outreach/Stakeholder Involvement**	**Dec-04**	**$655,200**	**$384,000**	**$1,039,200**
Task 1a	***Continuing efforts.*** *WMP efforts will contribute to the ongoing public outreach efforts in the watershed. It is anticipated that WMP–focused efforts will comprise approximately 25 percent of CCWG's public outreach efforts over the period.*				
Task 1b	***Establish desired condition.*** *CCWG will convene ad hoc committee(s) tasked with defining the desired condition of the watershed for each of the issue areas: Agricultural Management, Forestry Management, Hydrology, and Biological/Fisheries.*				
Task 1c	***Recommend actions.*** *Following task 1b, the CCWG will recommend actions to achieve desired physical condition of the watershed. These recommended actions will consider proposals from the stakeholder ad hoc committee(s) and the TAC.*				

Task 1d	***Endorse Recommendations.*** *After recommendations have been made by the CCWG, the group will actively engage agency and landowner support for the recommended actions. Ideally this support will be formalized through letters, MOUs, etc.* **Task Product(s):** *Regular public CCWG newsletters; minutes of ad hoc committee meetings; summary reports documenting the results of Task 1b and 1c.* **Success Criteria:** *Development of an ad hoc stakeholder committee(s) that accurately reflects the makeup of the watershed residents. Ability of stakeholder committee(s) to develop desired condition and recommend actions.*				
Task 2	**Technical Background and Analysis**	**May-03**	**$62,400**	**$270,600**	**$333,000**
Task 2a	***Complete Technical Background.*** *This task will build on the work of the Watershed Assessment, currently underway. Data gaps in the existing record will be filled with original data, where necessary, for informed decision making.*				
Task 2b	***Technical Analysis.*** *This task will be coordinated with task 1c above and is intended to provide technical support for recommendations of the group. It is anticipated that detailed technical analyses will be undertaken in areas of Agriculture, Forestry, Hydrology, and Biology/Fisheries. Where appropriate, modeling will be used to establish the efficacy of actions.* **Task Product(s):** *Technical memoranda detailing original data used to fill necessary data gaps and documenting the technical analyses for Agriculture, Forestry, Hydrology, and Biology/Fisheries.* **Success Criteria:** *Ability to adequately support Public Outreach, Documentation, and Pilot Project tasks.*				
Task 3	**Documentation**	**July-04**	**$336,960**	**$209,700**	**$546,660**
Task 3a	***Administrative Draft.*** *This draft will be circulated to the members of the CCWG, including the TAC and ad hoc stakeholder committee(s) for comments. Comments will be incorporated into the Public Draft.*				
Task 3b	***Public Draft.*** *This draft will be circulated to the public for comments.*				
Task 3c	***Review of Public Comments.*** *Comments on the Public Draft will be reviewed and, where appropriate, incorporated into the Final Draft. Responses to each comment will be documented to provide an administrative record of the comment process.*				
Task 3d	***Final Draft.*** *This draft will be the working copy of the WMP and will provide reference and direction for future management efforts in the wa-*				

	tershed.				
Task 3e	***Summary Presentation to CALFED.*** *Following publication of the Final Draft document, a summary presentation will be made to CALFED detailing the findings and recommendations of the WMP.* **Task Product(s):** *Administrative, Public, and Final Drafts. Summary presentation to CALFED.* **Success Criteria:** *Acceptability of Final Draft to wide range of stakeholder interests.*				
Task 4	**Pilot Projects**	**Dec-04**	**$243,360**	**$154,800**	**$398,160**
Task 4a	***Identify Pilot Project Locations.*** *One or more pilot project locations will be identified with the intent of ground-testing the recommendations of the CCWG.*				
Task 4b	***Plan Pilot Project Study.*** *Following selection of the site locations, planning will be conducted for the pilot projects. Planning will include definition of objectives of the pilot project study and identification of environmental and permitting requirements of the project.*				
Task 4c	***Design Pilot Project.*** *This task will include design of the pilot projects to a level of detail that would allow for implementation.*				
Task 4d	***Establish Monitoring Protocols.*** *Monitoring protocols will be developed to establish the physical linkages that the pilot projects are intended to confirm.* **Task Product(s):** *Pilot Project Report and associated maps; Design drawings for pilot project(s); monitoring plan for pilot project(s).* **Success Criteria:** *Pilot project(s) plans and reports suitable for implementation.*				
Task 5	**Monitoring**	**Dec-04**	**$37,440**	**$103,800**	**$141,240**
Task 5a	***Establish Protocols.*** *Protocols will be established to measure the effectiveness of the WMP, expanding on existing efforts in the watershed. Monitoring Plan will be submitted for CALFED review and approval prior to initiating data collection (Task 2).*				
Task 5b	***Monitor Results of Final Draft.*** *Monitoring efforts will be initiated following publication of the Final Draft.* **Task Product(s):** *Monitoring plan, including specific data to be collected and process for collecting and managing data.* **Success Criteria:** *Data sufficient to monitor the success of the WMP.*				
Task 6	**Project Management**	**Dec-04**	**$-**	**$158,700**	**$158,700**
Task 6a	***Coordination and Progress Reports.*** *Monthly coordination and progress reports will be submitted throughout the project documenting the*				

efforts of CCWG, including in-kind contributions of members and volunteers, and those of CCWG's consultant, CH2M HILL

Task Product(s): *Monthly progress and coordination reports and invoices.*

Success Criteria: *Timeliness of deliverables, delivery of tasks within specified budgets.*

CALFED WATERSHED PROGRAM BUDGET SUMMARY

Task Description I	Labor Rate	Hours	Total Labor	Supplies	Subcontract	Match	CALFED	Total
CCWG cost estimate								
Administration	$65.00*	2,700	$175,500	$35,100			$210,600	$210,600
Watershed Management Plan					$1,071,000	$1,335,360	$1,071,000	$2,406,360
Totals:			**$175,500**	**$35,100**	**$1,071,000**	**$1,335,360**	**$1,281,600**	**$2,616,960**
CH2M HILL Watershed Management Plan cost estimate								
Public Outreach/Stakeholder Involvement	$85.00**	3,000	$255,000	$51,000		$655,200	$306,000	$961,200
Technical Background/Analysis	$85.00	2,500	$212,500	$42,500		$62,400	$255,000	$317,400
Documentation	$85.00	1,750	$148,750	$29,750		$336,960	$178,500	$515,460
Pilot Projects	$85.00	1,250	$106,250	$21,250		$243,360	$127,500	$370,860
Monitoring	$85.00	750	$63,750	$12,750		$37,440	$76,500	$113,940
Project Management	$85.00	1,250	$106,250	$21,250			$127,500	$127,500
Totals:			**$892,500**	**$178,500**		**$1,335,360**	**$1,071,000**	**$2,406,360**

*Benefits/salary percentage = less than 30 percent

**Benefits/salary percentage = 34 percent. $85 dollars/hour represents an average rate for projected staff. Actual rates may vary somewhat.

4. Technical Feasibility

a. Similarity to Previously Implemented Projects

The CCWG formed under CALFED Grant No. 98-EO5 in response to the ERPP vision for Cottonwood Creek. In its grant application, the CCWG presented a blueprint for community-based "watershed stewardship" to "identify and organize the landowners to work with public land management agencies, interested parties, and resource managers...identify the watershed's geographic boundaries...identify stakeholders, form organization structure, collect input from stakeholders, research literature from resource management agencies, and list the watershed's needs." CCWG is currently engaged in a Watershed Assessment under CALFED Grant No. 2000-EO3 to compile existing watershed baseline data in a GIS-compatible format, identify data gaps, and lay the foundation for the WMP.

CCWG's efforts mirror successful, local landowner-driven watershed planning and management programs in other northern California communities located on Sacramento River tributaries. The Mill Creek Conservancy in Tehama County has successfully established itself as the local steward of the watershed; forged alliances among landowners, educational institutions, public agencies, businesses, and other interests; compiled baseline data; and developed the *Mill Creek Watershed Management Strategy Report*. A local watershed conservancy in Tehama and Glenn counties worked with 22 federal, state, and county agencies, irrigation districts, private citizens, and businesses to develop the *Fish, Wildlife, and Water Use Management Plan for Lower Stony Creek*. In Plumas County, landowners, conservancy groups, and public agencies joined to develop a watershed management plan for the upper Feather River and its tributaries and implement restoration actions under a variety of CALFED, Proposition 204, and Section 319(h) grants. These projects, all facilitated by CH2M HILL, demonstrate the effectiveness of a community-based approach to watershed management that incorporates local stakeholder interests, public agency collaboration, and public education and outreach. A similar effort is underway in the Deer Creek watershed of Tehama County. The physical processes that will be characterized in the WMP and the approaches that will be employed by CCWG in developing the WMP are also similar to programs have been undertaken in the Clear Creek Watershed of Shasta County and the Battle Creek Watershed in Shasta and Tehama counties.

b. Approaches and Methods

To achieve CALFED's ERPP vision for the Cottonwood Creek watershed, while simultaneously maximizing the benefits to the local community, the CCWG will use standard, accepted methods and approaches. These include approaches and methods of the *Watershed Program Plan* (CALFED, Final Programmatic EIS/EIR Technical Appendix, July 2000). The CCWG recognizes the necessity to forge collaboration between public and private interests. CCWG stated in its grant application for funding to form the group that "collaboration between public and private interests is necessary for a comprehensive program to create and sustain long-term, viable solutions for Cottonwood Creek." It further stated that "the watershed is too vast for citizens to accomplish all that needs to be done on a volunteer basis." The CCWG envisions itself as a vehicle for coalescing private and public interests to enact CALFED's vision for the watershed, while maintaining local community influence and ensuring that local needs are addressed.

Under CALFED grant No. 2000-EO3, CCWG is implementing the next step in the CALFED *Watershed Program Plan* by compiling a comprehensive Watershed Assessment to characterize existing and historical conditions, identify data gaps, and identify current watershed activities, including monitoring. As with all CCWG activities, the Watershed Assessment process includes an aggressive public outreach and education element. The intent of this proposal is to enact the next "desired outcome" of the *Watershed Program Plan* by developing a comprehensive WMP and formulating effective and imple-

mentable watershed monitoring protocols to judge the effectiveness of the WMP and to facilitate adaptive management. The WMP will address a broad range of watershed management issues, including:

- **Agricultural Management:** erosion and sediment control, agricultural practices, riparian restoration (revegetation, bank protection, stream channel restoration)
- **Forestry Management:** fuel and vegetation management, sediment / drainage controls (BMPs) on roadways, land stability and other geologic issues on both public and private lands
- **Hydrology:** streambank, channel, and meander zone restoration; fluvial geomorphology (sediment transport and gravel recruitment); flood control and floodplain and wet meadow restoration (flow retention); aquifer condition
- **Biological/Fisheries:** spawning gravel, water quality and water temperature, instream structures

The anticipated outcomes of the WMP include specific strategies for watershed management and maintenance that address CALFED and local community goals and objectives. These include water quality and habitat improvements; attenuation of peak flood flows that threaten levees and damage stream channels, streambanks, riparian communities, and property; and increased average annual yield to improve water supply for beneficial uses. To accomplish peak flood flow reduction and increase yield, the WMP will explore flow retention strategies, using wet meadow restoration and other methods, and potential conjunctive use opportunities. Conjunctive use opportunities in the area of Cottonwood Creek are being addressed through one of CCWG's collaborators, ACID, as part of a separately funded CALFED conjunctive use grant.

c. Maintaining the Watershed Management Plan

CCWG intends to maintain the WMP in perpetuity. CCWG will periodically review the WMP to ensure that it remains up to date and relevant to any changes in existing conditions (i.e., new regulations, flood damage, fire, etc.). Local support is expected to continue to grow, but the need for some outside funding will likely continue. As the largest undammed west side tributary and primary source of gravel recruitment to the upper Sacramento River, Cottonwood Creek is important to the health of the Bay-Delta system. It is assumed that state and federal agencies will continue to maintain an interest in this watershed and provide ongoing support to ensure its health.

5. Monitoring

a. Project Performance Measures

Performance measures for the WMP and future actions that it guides directly relate to achieving the stated goals and objectives of both CCWG and CALFED. These include improved or restored water quality and habitat values, higher yield to provide a more reliable water supply, and peak flood flow attenuation achieved through retention / detention and other strategies. The proposed WMP will formulate, evaluate, and prioritize watershed management strategies, establish performance criteria for their implementation, and include a monitoring plan to evaluate the effectiveness of implemented actions. The WMP will incorporate adaptive management principles to maximize the benefits of its implementation. Adaptive management will be enabled through collection and analysis of monitoring data, along with data sharing and communication with agencies and other watershed programs, to identify strategies that provide the most effective performance.

b. Coordination With and Support of Other Local and Regional Monitoring Efforts

CCWG's Watershed Assessment will identify current watershed activities being undertaken by public agencies and private interests, and the WMP will provide a vehicle to coordinate such activities, including monitoring, to achieve CCWG and CALFED goals and objectives. For example, CDF and the California Division of Mines and Geology have ongoing monitoring programs within the watershed that might have implications for the WMP. As the development of the WMP begins with the formulation of watershed management strategies, CCWG will begin to construct a monitoring plan that will provide pre- and post-project baseline data to evaluate the effectiveness of these alternative watershed management strategies and actions. Many existing monitoring programs, such as rainfall and streamflow gages, biological monitoring of salmonid redds and carcass counts, salmonid outmigration counts, and groundwater monitoring, will contribute to the monitoring program developed for the WMP. As CCWG continues to develop the Cottonwood Creek Watershed Assessment, the need to monitor other watershed conditions, such as existing or future landslides, will be determined. The CCWG TAC and general membership includes many agency staff who are willing to share monitoring information with CCWG. In turn, CCWG will disseminate this information through its WMP and associated technical memoranda, periodic status reports, and site- or project-specific technical reports. CCWG anticipates the use of agency-derived monitoring data, which will represent in-kind cost share contributions to the CCWG program. CCWG intends to regularly share information with other local watershed groups to help maximize the benefits of watershed management. The need for communication regarding the effectiveness of watershed actions is underscored by the CALFED *Watershed Program Plan*, which states, "Emphasis will be placed on developing sustainable locally led programs and projects that can be maintained *and replicated within the local communities* of the Bay-Delta watershed." Monitoring and communication are the keys to identifying and replicating successful strategies.

c. Potential Citizen Monitoring Programs

Evergreen School operates an environmental education program. It is anticipated that Evergreen and other schools will participate in monitoring as a practical educational experience. There also is a potential for persons working in the timber industry and other private interests to participate. For example, private interests are monitoring the effects of the Rosewood Ranch Vegetation Management Program. These and other citizen monitoring opportunities will be explored as part of the ongoing Watershed Assessment. Citizen monitoring will represent valuable in-kind services that support the WMP.

d. Monitoring Protocols

CCWG will leverage the judgment and experience of its private industry and public agency friends and collaborators, including industry and agency representatives on the TAC, to identify and imple-

ment appropriate, widely accepted monitoring standards, such as U.S. Geological Survey (USGS), CDF, and American Society for Testing and Materials (ASTM) standards and accepted practices. Monitoring for CCWG's Watershed Assessment, WMP, and actions guided by the WMP may include state and federal agency stream gage and precipitation gage data, anadromous fish redd and carcass counts, salmonid outmigration counts, and DWR groundwater level monitoring. The current Watershed Assessment project will identify all watershed conservation, restoration, and monitoring activities currently being conducted by private interests and agencies and determine which of those monitoring activities are relevant to the WMP.

e. How Data Collection and Analysis Will Inform Local Decision Making

The WMP will identify the types of information necessary to determine whether the goals and objectives are being met through WMP strategies. The WMP will also include a monitoring plan detailing how these data will be collected and analyzed. CCWG intends to leverage existing agency monitoring programs that are relevant to the WMP, which will constitute a significant cost-share element of the CCWG program. Decision makers within the watershed will use these monitoring results to select and refine adaptive watershed management strategies that are shown by monitoring data to result in conditions that most closely conform to CALFED and CCWG goals and objectives for the watershed. These strategies are, in turn, informed by the ERPP visions for Cottonwood Creek. As noted above, by sharing data among stakeholders, collaborating agencies, and other community-based watershed groups, decision makers can identify and replicate the strategies shown by monitoring data to be most effective.

6. Scientific Basis

a. Assessment of Watershed Conditions by CCWG and Others

With the assistance of collaborating agencies and CH2M HILL, CCWG is undertaking a Watershed Assessment under CALFED Grant No. 2000-EO3. The Watershed Assessment includes mapping and GIS-compatible database development to characterize historical and current watershed conditions. Databases will include hydrology; geology, soil and vegetative cover; sediment sources, transport rates, and extraction; water quality; fishery resources; land use and ownership; fluvial geomorphology (including gravel transport); riparian communities; endangered species; and wildlife resources.

b. Previous Assessments Used to Establish Project Assumptions, Goals, and Objectives

The Watershed Assessment will identify historical and current management and restoration activities undertaken in the watershed by other private interests and agencies to contribute to development of WMP strategies. Of particular value will be the identification of existing monitoring associated with these activities that can contribute to the development and maintenance of the WMP. Among the previous assessments identified is the *Beegum Watershed Analysis* (Yolla Bolla Ranger District, South Fork Management Unit, Shasta-Trinity National Forests, March 1997). Similar in approach to the proposed Cottonwood Creek WMP, this analysis focused on three management objectives (timber production, wildlife management, and fuels management) to address core watershed issues, such as erosion processes, hydrology and stream channel conditions, water quality, vegetation, species and habitats, and human land uses. The *Beegum Watershed Analysis* indicates that monitoring programs have been established to track watershed conditions. CCWG will explore whether these and other monitoring activities revealed by the Watershed Assessment are relevant to the WMP.

c. Scientific Assumptions Used to Develop Project Goals, Objectives, and Proposed Actions

Many of CCWG's assumptions, goals, and objectives derive from CALFED's ERPP and *Watershed Program Plan*. In its grant application for the Cottonwood Creek Watershed Assessment, CCWG explicitly committed to consulting with other community-based watershed groups and resource agencies to develop its watershed programs. Among CCWG's assumptions are that good land use practices (e.g., fuel and vegetation management, agricultural practices, erosion control) can beneficially affect the health of the watershed and that local community-based watershed management in collaboration with resource agencies can best leverage the scientific and technical resources of the agencies to achieve the ERPP vision for the Cottonwood Creek Ecological Management Zone in a way that conforms closely with the community's needs and preferences. To apply these assumptions, CCWG has enlisted the assistance of members of the scientific and regulatory community and private industry professionals to serve on its TAC and has made strategic alliances with public agencies to leverage their resources. For example, in developing the WMP, CCWG will explore potential conjunctive use opportunities in the area of Cottonwood Creek, which are being addressed through one of CCWG's collaborators, ACID, as part of a separately funded CALFED conjunctive use grant.

d. Consistency With Scientific Assumptions and Previous Assessments

The proposed project is a comprehensive WMP that will identify and guide implementation of effective watershed management actions. The project will include the design of pilot projects as part of an adaptive management approach. As a preliminary step in developing the WMP, CCWG is conducting a Watershed Assessment under CALFED Grant No. 2000-EO3.

CCWG acknowledges the scientific basis for CALFED's ERPP and *Watershed Program Plan* and is committed to achieving the ERPP vision for the watershed, while addressing local needs and priorities. The WMP will be developed through public outreach and education and collaboration with re-

source agencies, professional foresters, other stakeholders, and science and engineering consultants. Watershed management strategies will be formulated by building on the Watershed Assessment, which is being conducted with the assistance of CH2M HILL, which has significant northern California experience in watershed assessment, management, conservation, and restoration. The Watershed Assessment will identify and build on previous watershed management actions within the Cottonwood Creek watershed and similar northern California watersheds. Both the CCWG and its consultant are working in collaboration with resource agencies. This collaborative approach by local stakeholders in cooperation with private industry professionals, qualified consultants, and resource agencies is intended to ensure that the WMP and future actions that it guides will be consistent with accepted scientific assumptions, methods, and practices.

e. Baseline Knowledge Used to Support Management Actions Described in the Proposal

The Cottonwood Creek Watershed Assessment will directly contribute to WMP development. The Watershed Assessment is generating maps and information in GIS-compatible format on hydrology; soil and vegetative cover; sediment sources, transport rates, and extraction; water quality; fishery resources; land use and ownership; fluvial geomorphology (including gravel transport); riparian communities; endangered species; and wildlife resources. This includes existing historical information from previous assessments, agency records and databases, and monitoring in the watershed. Monitoring data generated in conjunction with the Watershed Assessment, the WMP, and projects that are implemented as a result of the WMP will continue to generate more robust baseline knowledge. Development of the WMP per se also will generate significant information. For example, potential conjunctive use opportunities will be explored through the CCWG's partnership with ACID, which has secured a grant to investigate conjunctive use opportunities in the watershed. It also is expected that new data will be generated as the development of the WMP addresses such issues as flow retention through wet meadow restoration and other mechanisms that mimic or restore natural processes to attenuate peak flood flows and increase average annual yield. CCWG and its collaborators and consultants will communicate with other community-based watershed groups that are implementing such strategies (e.g., Indian Valley Flood Management Coalition and Feather River Coordinated Resource Management Group) to extend the pool of baseline information that will contribute to WMP development.

7. CALFED Objectives

a. Addressing Multiple CALFED Objectives

Water Supply Reliability. The WMP will explore means of increasing total annual average yield through flow retention and investigate aquifer condition, which may involve using monitoring data from DWR, ACID, and the Redding Area Water Council (RAWC). Conjunctive use opportunities to improve water supply reliability are being addressed through ACID as part of a separately funded CALFED conjunctive use grant. Information from this program will be available to the CCWG through the established partnership between CCWG and ACID. ACID's conjunctive use project will include drilling monitoring wells and taking periodic water level measurements in those wells and existing production wells to evaluate the feasibility of a conjunctive use program in the southern portion of the Redding Groundwater Basin. ACID also participates in the RAWC, a consortium of 13 Redding Basin water purveyors and other interests. RAWC is nearing completion of Phase 2B of its regional water resources management plan; conjunctive use is one of the core plan elements. The initial phase of ACID's conjunctive use grant is valued at $300,000, and work performed to date by the RAWC has exceeded $500,000, plus several hundred thousand dollars in in-kind services (staff time) by purveyors contributing to this effort. In Phase 2B, RAWC developed an integrated Redding Basin groundwater/surface-water model at a cost of more than $180,000. The database for the model includes precipitation and runoff data within the Cottonwood Creek watershed over a representative range of hydrologic conditions. These data will be useful to CCWG and available for the WMP. All RAWC efforts were locally funded. Use of the model by CCWG is available through a written request to RAWC.

Water Quality. The WMP will address erosion and sedimentation control, land stability, agricultural and forestry management practices, revegetation, range enhancement, wet meadow restoration, vegetation and fuel management, and mine waste/tailings, all factors that can affect water quality. The Watershed Assessment is generating baseline data on these variables. The WMP will address water quality, including temperature, nutrients, and other constituents, and will likely prescribe water quality monitoring.

Ecosystem Quality. The WMP will address riparian habitat restoration; revegetation; natural stream processes; water temperature and quality; stream channel, bank, and floodplain restoration; fishery resources, riparian community conditions, endangered species, and wildlife resources; engineered in-stream structures; and the agricultural and forestry management practices that affect ecosystem quality. The CCWG Watershed Assessment is generating baseline data on these issues and associated monitoring requirements.

Levee Stability. The WMP will address strategies for attenuating peak flood flows, including flow retention by wet meadow restoration, impoundments, and stream channel and floodplain restoration. These strategies may also improve annual average yield. Baseline hydrologic data, including annual flow and flood hydrographs, are being compiled for the Watershed Assessment.

b. Relationships Between Watershed Processes, Watershed Management, and the Primary Goals and Objectives of CALFED

The WMP is being divided into focus areas, each of which involves a variety of watershed issues as shown below:

- **Agricultural Management:** erosion and sediment control, agricultural practices, riparian restoration (revegetation, bank protection, stream channel restoration)
- **Forestry Management:** fuel and vegetation management, sediment/drainage controls (BMPs) on roadways, land stability and other geologic issues on both public and private lands

- **Hydrology:** streambank, channel, and meander zone restoration; fluvial geomorphology (sediment transport and gravel recruitment); flood control and floodplain and wet meadow restoration (flow retention); aquifer condition
- **Biological/Fisheries:** spawning gravel, water quality and water temperature, instream structures

These focus areas and issues will be linked in a report that shows the interrelationships among the focus areas and between focus areas and the goals and objectives of CCWG and CALFED. Human use of the watershed is necessary to ensure regional economic vitality, employment, and a high quality of life for watershed residents. Consideration must be given to values relating to water quality, range and forage, agriculture and forestry, fisheries, wildlife, and recreation as they relate to CALFED primary objectives. Thus, human activities, such as agricultural and forestry, are identified as focus areas for such watershed issues as erosion and sedimentation, streambank protection, and fuel reduction. This approach is similar to that taken for the *Beegum Watershed Analysis* discussed above. Other relationships between the proposed project's characterization of natural and human-affected watershed processes and CALFED goals and objectives are readily established and will be fully developed in the WMP. For example, the water retention elements of the WMP will have a beneficial effect on attenuating peak flood flows (levee stability) and may also improve annual average yield (water supply reliability). The proposed investigation of aquifer conditions relates to exploring conjunctive use opportunities (water supply reliability). Investigations of spawning gravel, riparian habitat, water quality and temperature, and instream structures have implications for ecosystem quality (see also response 7.a. above). As a comprehensive WMP, the proposed project will explicitly establish these relationships to enable identification and analysis of watershed management strategies that will contribute to achieving CALFED objectives.

c. Lead Agencies for CEQA and NEPA Environmental Compliance

CCWG anticipates serving as the lead agency for CEQA; the U.S. Forest Service or Bureau of Land Management will likely be the NEPA lead agency. If the lead agencies and participating resource agencies require, a programmatic environmental document for the WMP will be prepared that tiers off the CALFED Programmatic EIS/EIR. Otherwise, an environmental document, if required by the agencies, will be prepared in conjunction with permitting and construction of specific watershed management actions that will be designed in conjunction with the WMP. However, permitting, environmental documentation, and construction are not included in the scope of this proposal, which does not include any actions that will directly affect the environment.

8. Other

9. Forms

Letter of Support

Letters of Notification